

2020 Recycle Pond A Inspection Report

Entergy Arkansas, LLC White Bluff Plant
Recycle Pond A (South)
Redfield, Arkansas

January 2021
Project No. 35207213

Prepared for:
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Terracon

Environmental



Facilities



Geotechnical



Materials

PROFESSIONAL ENGINEER'S CERTIFICATION

This report on the annual engineering inspection of the Entergy Arkansas, LLC White Bluff Plant Recycle Pond A and supporting documentation was prepared under the direction and supervision of a qualified, State of Arkansas-registered Professional Engineer. Mr. David McCormick, PE, of Terracon Consultants, Inc. (Terracon), was responsible for the overall preparation of this report. The report has been prepared to fulfill the requirements of §257.83(b). Based on the inspection of the Recycle Pond and review of available documents the design, construction, operation, and maintenance of the pond is consistent with recognized and generally accepted good engineering standards.



1.15.21

David C. McCormick, P.E.
Arkansas Professional Engineer No. 9199

Date



Expires 12.31.21

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1.0 INTRODUCTION

1.1 Purpose of Report

The purpose of this report is to document the annual inspection of the White Bluff Plant's Recycle Pond A (south pond) in accordance with 40 CFR §257, *Subpart D - Disposal of Coal Combustion Residuals From Electric Utilities* (the CCR Rule). In particular, the report has been prepared to comply with §257.83(b), which requires an inspection to be conducted by a qualified professional engineer to ensure that the design, construction, operation, and maintenance of the recycle pond is consistent with recognized and generally accepted good engineering standards.

The report includes:

- Changes in geometry of the pond,
- Location and type of existing instrumentation and the maximum recorded readings of each instrument,
- Approximate minimum, maximum and present depth and elevation of impounded water and CCR,
- Storage capacity of the recycle pond at the time of inspection,
- Approximate volume of impounded water and CCR at time of inspection,
- Any appearance of an actual or potential structural weakness of the pond; and
- Other changes which may affect stability or operation of the pond.

1.2 White Bluff Power Plant Recycle Pond Information

Entergy Arkansas, LLC (Entergy) operates the White Bluff Steam Electric Station, located on the west bank of the Arkansas River, near Redfield in Jefferson County, Arkansas (See **FIGURE 1**). This plant previously operated two Water Recycle Ponds: A and B, as part of its process water system for bottom ash transport system. During operations, the bottom ash from the boilers is removed from the hopper by a sluicing process and transported to four dewatering bins. After the water is drained from the bins, the ash is unloaded into trucks and taken to the on-site landfill for disposal or sold as a product for beneficial reuse. The water drained from the dewatering bins is routed to the recycle ponds for intermediate storage prior to being returned to the bottom ash transport system for reuse in the sluicing operations. Only Pond B remains in operation.

2.0 DESCRIPTION OF RECYCLE POND LAYOUT

The recycle pond system consists of 2 ponds, Recycle Pond A (south pond) and Recycle Pond B (north pond). Recycle Pond A is not incised and is unlined. This report will cover Recycle Pond A only. The recycle pond area is approximately 19 acres. Pond A is approximately 7.1 acres (768' x 403') with a bottom elevation of approximately 256.5 ft msl and has a capacity of 190,600 cubic yards. Pond A has a rim elevation at approximately 280.0 ft msl. The interior slopes constructed at 2.5:1. There are stormwater swales around the pond to control stormwater and limit the volume of run-on. The facility has ceased placement of CCR and non-CCR waste streams in the pond. Recycle Pond A has been mostly drained, and the only influent to the pond is from rainwater and groundwater. The facility has commenced closure of Pond A as of October 5, 2018. Closure will be completed within 5 years of the commencement date in accordance with 40 CFR 257.102(c).

3.0 REVIEW OF AVAILABLE INFORMATION

A review of available information regarding the status and condition of Recycle Pond A including files available in the operating record, such as pond design and construction information, previous structural stability assessments, weekly inspection reports, and any previous annual inspections has been conducted. Based on review of this information, no signs of actual or potential structural weakness were noted. As previously noted, Recycle Pond A has been mostly drained and closure initiated.

4.0 ASSESSMENT OF RECYCLE POND

This section of the report provides a summary of the inspection of the White Bluff Plant’s Pond A that was conducted on December 8, 2020. Charah Solutions, Inc. (Charah) has been Entergy’s ash management contactor throughout 2020. The assessment included an onsite inspection of the pond area, discussions with Charah and Entergy personnel, review of weekly inspection reports of the facility, and review of documents pertaining to the operation and compliance of the pond. Photographs of the site inspection are included in **APPENDIX B**.

4.1 Changes in Geometry

During the reporting period, no changes were made to the geometry of Pond A. At the time of inspection Pond A had stormwater present/retained in the pond.

4.2 Instrumentation

Two (2) piezometers and ten (10) monitoring wells are in operation around the Recycle Pond area. No new monitoring wells or piezometers were installed during the reporting period. **TABLE 4.1** shows the max readings of each piezometer and monitoring well during the reporting period.

TABLE 4.1
2020 Recycle Pond Instrumentation Data

Name	Northing	Easting	Type	Maximum Reading	Date of Reading
PZ-1	1,949,513.90	1,272,146.80	Piezometer	n/a	n/a
PZ-5	1,949,067.50	1,272,460.60	Piezometer	n/a	n/a
RP-1	1,949,807.10	1,273,086.50	Monitoring Well	278.13	6/10/2020
RP-2	1,950,042.00	1,274,004.00	Monitoring Well	277.74	6/10/2020
RP-3	1,949,486.50	1,273,729.90	Monitoring Well	276.93	6/10/2020
RP-4	1,949,249.30	1,272,808.40	Monitoring Well	276.81	11/3/2020
RP-5	1,948,586.20	1,272,475.80	Monitoring Well	274.51	11/3/2020
RP-6	1,948,590.90	1,271,958.90	Monitoring Well	273.48	11/3/2020
RP-7	1,949,766.80	1,271,839.40	Monitoring Well	273.07	6/10/2020
RP-8	1,949,162.50	1,271,875.30	Monitoring Well	276.48	11/3/2020
RP-9	1,948,797.00	1,272,803.30	Monitoring Well	275.58	11/3/2020
RP-10	1,949,510.50	1,272,499.00	Monitoring Well	277.79	11/3/2020

Note: Water elevations from PZ-1 and PZ-5 were not taken during the reporting period.

4.3 Pond Characteristics

Shown below in **TABLE 4.2** is a summary of the minimum, maximum, and present depth and elevation of impounded water and CCR, storage capacity of the recycle pond at the time of inspection, and the approximate volume of impounded water and CCR at the time of inspection. Pond A was previously drained for maintenance and closure. At the time of inspection Pond A had water present in the pond.

TABLE 2
Recycle Pond Characteristics

	Water	CCR
Minimum Depth (ft)	0	>0
Maximum Depth (ft)	<23.5	<23.5
Present Depth (ft)	Mostly Drained	<23.5
Storage Capacity (cy)	190,600	
Volume of Media (cy)	Mostly Drained	<190,600

4.4 Appearance of Structural Weakness

A visual inspection of Pond A was conducted to observe signs of actual or potential structural weakness or any conditions that are or may disrupt the operations. Pond A was mostly drained. Some stormwater was present in Pond A. No signs of potential structural weakness were noted. No signs of potential structural weakness were noted during the inspection. Also, the piezometers and monitoring wells appeared to be in good condition.

4.5 Other Changes That May Affect Stability or Operation

Based on discussions with Entergy personnel, Charah personnel, and field observations there were no changes made to Pond A in this reporting period that would affect the stability or operation.

APPENDIX A
Figures



RECYCLE POND LOCATION

N:\GEC\ARCHIVE\CAD\08000\13\0207213 - WB CCE 2020\01 - SITE MAP\WHITE BLUFF POND A.DWG

Project Mngr:	TLB	Project No.	026-001-35207213
Drawn By:	TLB	Scale:	N.T.S.
Checked By:	DCM	File No.	101
Approved By:	DCM	Date:	12/16/2020

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SITE MAP

2020 ANNUAL CCR INSPECTION REPORT
ENERGY WHITE BLUFF PLANT
 RECYCLE POND A

REDFIELD ARKANSAS

FIG. No.	1
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RECYCLE
POND A
(SOUTH)



LEGEND



PZ-1

PIEZOMETER



RP-1

MONITORING WELL

N:\GEC\ARCHIVE\CAD\08000\13\30207213_1\WB_CCE_2020\102_RECYCLE_PONDS\LOCATION_MAP.DWG

Project Mngr:	TLB	Project No.	026-001-35207213
Drawn By:	TLB	Scale:	1" = 500'
Checked By:	DCM	File No.	102
Approved By:	DCM	Date:	12/16/2020

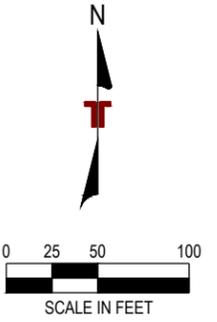
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RECYCLE POND A LAYOUT
2020 ANNUAL CCR INSPECTION REPORT
ENERGY WHITE BLUFF PLANT
RECYCLE POND A

REDFIELD ARKANSAS

FIG. No.	2
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- LEGEND:**
- 280 — MAJOR CONTOUR
 - 281 — MINOR CONTOUR
 - PERIMETER ROAD

NOTES:

1. TOPOGRAPHIC INFORMATION IS FROM AN AERIAL SURVEY BY TERRACON CONSULTANTS, INC. ON DECEMBER 8, 2020.

REV	DATE	BY	DESCRIPTION

TOPOGRAPHIC SURVEY
 2020 ANNUAL CCR INSPECTION REPORT
ENERGY WHITE BLUFF PLANT
 RECYCLE PONDS
 REDFIELD ARKANSAS


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FIGURE 3

DESIGNED BY:	TLB
DRAWN BY:	TLB
APPVD. BY:	DCM
SCALE:	SEE SCALE
DATE:	12/16/2020
JOB NO.:	026-001-3620721
ACAD NO.:	103
SHEET NO.:	- OF -

N:\GEORGINA\CAD\2020\01\36207213 - WB CCR 2020\103 - RECYCLE POND A TOPOGRAPHIC SURVEY.DWG

APPENDIX B
Photos of Annual Engineering Inspection



1. Looking west at the east side of Pond A. Stormwater is present/retained in the pond.



2. Looking north at the south side of Pond A. Stormwater is present/retained in the pond.



3. Looking east at the west side of Pond A. Stormwater is present/retained in the pond.



4. Looking down at east side of Pond A. Stormwater is present/retained in the pond.



5. Looking down at the west side of Pond A. Stormwater is present/retained in the pond.